

REMARKS

Claims 1, 4-9 and 12-16 are pending in this application. Of these claims, claims 1, 4, 6-9 and 12-15 stand rejected under 35 USC §103(a) as being unpatentable over Kumar et al. in view of Kikinis. Claim 5 stands rejected under 35 USC §103(a) as being unpatentable over Kumar et al. in view of Kikinis and Treyz et al. Claim 16 stands rejected under 35 USC §103(a) as being unpatentable over Kumar et al. in view of Kikinis and Parmee et al.

In view of the following remarks, these rejections are traversed, and reconsideration of this application is respectfully requested.

Applicant's invention is a multi-protocol adapter that includes an integrated CPU having an embedded operating system that allows the adapter to simultaneously communicate with several computers using different protocols. The operating system performs one or more of interrogating, monitoring, retrieving data, downloading data, recording data, revising/updating data, performing diagnostics and revising/updating the operating program of the computer. The adapter also includes a plurality of daughterboard interface slots for accepting daughterboard interface modules that expand the number of protocols or change the protocols available to the adapter. Applicant respectfully submits that the prior art of record does not teach or suggest a multi-protocol adapter that is able to simultaneously communicate with more than one computer running different protocols, where the adapter has the capability of expanding the protocols it can accommodate by accepting or interchanging daughterboard interface modules.

U.S. Patent No. 5,970,069 issued to Kumar et al. discloses a communications system that includes a remote access processor 34. The processor 34 allows various devices, such as a file server 46, a computer 38, an internet network 50, a network server 30, a personal computer 52, a video server 51, etc., to communicate with each other through local area network (LAN) interfaces 36, serial wide area network (SWAN) interfaces 40, 42 and 44, and peripheral component interfaces 38. Figure 3 is a block diagram of the remote access processor 34.

Independent claims 1 and 4 state that the multi-protocol adapter can simultaneously communicate with several remote computers that are running different protocols. Applicant acknowledges that the various interfaces used by the remote access processor 34 may be operating different protocols. However, Applicant submits that Kumar et al. does not teach or suggest that the processor 34 can simultaneously communicate with the various devices using different protocols through the interfaces. The Examiner has directed Applicant's attention to column 1, line 59 – column 2, line 32; column 5, line 18 – column 6, line 55 and column 7, line 14 – column 9, line 44 as teaching this feature of Applicant's claimed invention. Applicant has carefully reviewed these sections of Kumar et al. and cannot find a teaching therein that the remote access processor 34 simultaneously communicates with the various devices using different protocols at any given time. Column 4, lines 55 and 56 of Kumar et al. does state that the “[r]emote access processor 34 provides simultaneous connectivity to all three SWAN interfaces 40, 42 and 44 from file server 46, computer server 48 and network server 30.” However, this section of Kumar et al. does not state that the SWAN interfaces 40, 42 and 44 are operating different protocols.

Because the Examiner has identified a large portion of Kumar et al. as teaching this feature of Applicant's claimed invention, Applicant respectfully requests that the Examiner specifically identify the teaching in Kumar et al. where this feature of Applicant's claimed invention is disclosed, if she maintains the final rejection.

Independent claim 1 also includes a plurality of daughterboard interface slots that accept at least one daughterboard interface module for expanding the number of protocols available to the adapter. This feature of Applicant's invention allows the protocols being used by the adapter to be changed or increased by adding more daughterboard interface modules or exchanging one daughterboard interface module with another. The Examiner has directed Applicant's attention to figure 3 and column 4, lines 45 – 57 of Kumar et al. to teach this feature of Applicant's invention. This section of Kumar et al. is recreated below.

LAN interface 36 can be configured to support a variety of protocols, such as IP and IPX over Ethernet. In the embodiment shown in FIG. 2, LAN interface 36 is an Ethernet interface which supports 10 Mb/s and 100 Mb/s data transfer rates in either full or half-duplex mode according to IEEE standards 802.3 and 802.3u. LAN interface 36 is coupled to a file server 46 and a compute server 38, for example, over Ethernet network 50.

SWAN interfaces 40, 42 and 44 provide connectivity to remote devices 51, 52 and 53 over wide area networks 54. Remote access processor 34 provides simultaneous connectivity to all three SWAN interfaces 40, 42 and 44 from file server 46, compute server 48 and network server 30.

Applicant respectfully submits that this section, or any other section, of Kumar et al. does not teach a daughterboard interface module, a plurality of daughterboard interface slots for accepting daughterboard interface modules, or even expanding the

protocols that the remote access processor 34 can accommodate. What this section of Kumar et al. does teach is that the LAN interface 36 can support a variety of protocols, such as IP and IPX over Ethernet, and teaches various parameters and speeds of the interface 36.

Applicant submits that once the remote access processor 34 is fabricated and packaged, it cannot be changed by adding or removing daughterboard interface modules to change the available protocols. Particularly, column 5, lines 18 – 24 states that the remote access processor 34 is implemented on a single integrated circuit chip having a plurality of inputs and outputs. Further, the integrated circuit chip is manufactured using CMOS fabrication technology, and packaged with a 256 position plastic ball grid having the dimensions 27 mm x 27 mm x 2.1 mm. Applicant submits that it is impossible to replace or expand daughterboard interface modules in the packaged integrated circuit chip processor 34 fairly taught and suggested by Kumar et al. because the processor 34 is a small sealed integrated chip that is not designed for this capability. All of the elements and components of the processor 34 are fixed, and cannot be replaced or added to. Therefore, Applicant submits that Kumar et al. does not remotely teach or suggest the daughterboard interface module or the daughterboard slots of Applicant's independent claims.

Further, independent claim 4 includes at least one daughterboard and an interface connection of the at least one daughterboard in combination with many other elements of the adapter. Applicant submits that Kumar et al. does not fairly teach or suggest a daughterboard interface module in a multi-protocol adapter in combination with all of a serial port with diagnostics and system maintenance, a flash socket for

storage of system software, a slot for connection of a peripheral, a socket for a connection of RAM, an interface for connection of system RAM, an interface for connection of mass-storage devices, a battery for clock and configuration memory backup, an infrared serial interface and a piezoelectric speaker.

U.S. Patent No. 6,243,596 issued to Kikinis discloses a battery pack for a cellular telephone, and has nothing to do with a multi-protocol adapter in communication with one or more remote computers using a plurality of different protocols. It is believed that the Examiner is relying on Kikinis to teach an infrared serial interface. However, Kikinis does not teach or suggest an infrared serial interface in combination with a multi-protocol adapter of the type claimed by Applicant. Therefore, Applicant submits that the Examiner has improperly combined the teachings of Kikinis and Kumar et al. in that there is no suggestion or motivation to combine the reference teachings. Further, Kikinis does not teach or suggest an adapter simultaneously communicating with one or more computers running different protocols, and daughterboard interface slots and daughterboard interface modules for expanding the protocols of the adapter, as discussed above. Therefore, Applicant submits that Kikinis does not provide the teaching missing from Kumar et al. that would make Applicant's claimed invention obvious.

U.S. Patent No. 6,526,335 issued to Treyz et al. discloses an automobile personal computer system that communicates with numerous devices and facilities, including hand-held computer devices, cellular telephones, wristwatches, laptop computers, etc., wirelessly via satellite networks. It is believed that the Examiner is relying on Treyz et al. to teach a Linux operating system. Applicant respectfully submits

that there is no motivation or suggestion in Treyz et al. to combine a Linux operating system and a multi-protocol adapter. Further, Applicant submits that the Treyz et al. automobile personal computer system fails to teach or suggest an adapter simultaneously communicating with one or more computers running different protocols, and daughterboard interface slots and daughterboard interface modules for expanding the protocols of the adapter as discussed above. Therefore, Applicant submits that Kikinis does not provide the teaching missing from Kumar et al. that would make Applicant's claimed invention obvious.

U.S. Patent No. 5,659,471 issued to Parmee et al. discloses a vehicular semi-automated mechanical transmission system. It is believed the Examiner is relying on Parmee et al. to teach some of the vehicle protocols identified in dependent claim 16. However, Parmee et al. does not teach or suggest an adapter simultaneously communicating with one or more computers running different protocols, and daughterboard interface slots and daughterboard interface modules for expanding the protocols of the adapter as discussed above. Therefore, Applicant submits that Parmee et al. does not provide the teaching missing from Kumar et al. that would make Applicant's claimed invention obvious.

In view of the preceding remarks, it is respectfully requested that the §103(a) rejections be withdrawn.

It is now believed that this application is in condition for allowance. If the Examiner believes that personal contact with Applicant's representative would expedite prosecution of this application, she is invited to call the undersigned at her convenience.

Respectfully submitted,

WARN, HOFFMANN, MILLER & LaLONE, INC.

Dated: 3/23/05

By: John A. Miller
John A. Miller
Reg. No. 34985

P.O. Box 70098
Rochester Hills, Michigan 48307
Telephone: (248) 364-4300
Facsimile: (248) 364-4285